Ganesh Kishore

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Summary

Biotechnology student with a background in software and electronics engineering, driven by a strong interest in food and biochemical engineering.

Education

University of Wroclaw (UWr), Wroclaw, Poland
BSc in Biotechnology   *September 2025 – Present*

Chhattisgarh Institute of Medical Sciences (CIMS), Bilaspur
Bachelor of Medicine, Bachelor of Surgery (MBBS)   *September 2023 – January 2025*
Transferred to UWr after the first year.

Languages

English (C1 – Fluent)
Polish (B1–B2 – Intermediate)
Hindi (Native)

Projects

Smart Tracking Software   *Apr 2025 – May 2025 Apr 2025 – May 2025*

- Developed software to detect and track unauthorized file distribution across P2P networks (torrents and magnet links).
- Implemented magnet scraping using the **Jackett API** and peer discovery using the **qBittorrent API**, followed by the **ipwhois.io API** to extract peer IP addresses and associated metadata.
- Utilized a Tkinter-based graphical interface for real-time monitoring and data inspection of over 100 magnets and 1000+ peers per magnet simultaneously. **Tech stack:** Python, REST APIs (Jackett API, qBittorrent API, ipwhois).
  Potential impact: Detecting and disrupting illegal content distribution over P2P networks.

HemoCnn — ML cell classifier   *Apr 2025 – May 2025*

- Trained a machine learning model using contrastive learning to classify basic cell types (Basophil, Eosinophil, Erythroblast, Immature Granulocyte (IG), Lymphocyte, Monocyte, Neutrophil & Platelet).
- The model was trained on publicly available cell-image datasets and packaged into a standalone Windows application (.exe).
- Achieved over 89.38% accuracy in cell-type identification. **Tech stack:** Python, Pytorch.
  Potential impact: May be applied to automate RBC/WBC counting and assist in rapid blood smear analysis.

Smart-Hydroponics-PCB   *May 2025 – Jun 2025 May 2025 – Jun 2025*

- Developed a PCB tailored for small scale hydroponics automation, enabling nutrient solution dosing based on TDS levels, while continuously tracking key parameters such as humidity, pH, and temperature.
- Employed an **Arduino UNO R3** interfaced with a 0.96 SSD1306 OLED display and sensor modules, which were linked to pumps responsible for filling and draining the system. **Tech stack:** C++, ArduinoIDE, KiCad.
  Potential impact: May assist in automating small scale hydroponic systems.

Projects I'm working on

Research paper   *Dec 2025 – Present*

- Research paper on synthetic biochemical production in a decentralized and continuous manner. **Tech stack:** COPASI, SnapGene, ImageJ, ChimeraX.
  Potential impact: Illustrates a process that could potentially lower the cost of manufacturing medicines and improve their availability for people living in remote regions.

Skills

Coding Tools: C/C++, Python, MySQL, Git/Github
Modeling Tools: Fusion360, KiCad, ArduinoIDE, Blender
Biotechnology Tools: SnapGene, ImageJ, ChimeraX, Alphafold, AutoDock, COPASI.